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THE NOURISHMENT OF MAN

IN REGARD TO  
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HIS HEALTH,

AND

THE WANT OF IT.

BY

Jr. Wm. Dahlman, M. D.

*"To enlighten the people in all things is the duty of every Man  
who possesses the qualifications to do it."*

The late F. C. DAHLMAN, Prof. of the University of Bonn.

SAINT JOHN, N. B.

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# The Nourishment of Man.

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## I.

### INTRODUCTION.

The distinguished Arabian physician Avicenna, said: "He who is hungry must eat;" but there are only a few who know the properties of what they eat. Boerhave, the celebrated Dutch physician, went a step farther in saying: "He who will live must eat—but most men eat in order to die sooner than necessary." Hippocrates, the father of medicine, declares, "A man who will neither eat nor drink, shows clearly that he is a fool;" and the old Professor Langenbeck, of Goettingen, taught, "without eating and drinking there can be no maintenance of life, for to hunger and blood-letting are both the same." And not only eminent physicians, but also great poets go in for the importance of the nourishment of man. For instance, Schiller, who said that Hunger and Love keep the world in good connection, and the assertion of Lord Byron, "nothing but youth can keep us in full lustre," is by Goethe practically explained in the words, "as long as a man can chew, and drink, and kiss, he may be called a happy man," &c., &c.

Now eating and drinking mean nothing else but introducing substances from the outer world into the body, for the purpose of maintaining the same. Nature

offers many things for nourishment which are in such a condition that they may be eaten by man without any artificial preparation, as water, roots, berries, roots, &c. Most of the means of nourishment of our body, however, cannot be enjoyed by us without artificial preparation, as dried pulse, corn, potatoes; or, are much more fitted for nourishment if they have previously undergone some artificial preparation, as fish, meat, and many sorts of fruit and roots.

Eating and drinking, therefore, appear in their effect on the body and on the health and period of life of man in general, very much dependent on the artificial preparation of natural products—I mean the art of cooking. Now, the art of cooking natural products ascends from the raw to the refined, from the single to the composed material, and ends among the cultivated nations of the present time, in this manner, that the manner of preparing nourishment for man is most carefully chosen, according to the principles which the physiology of the human body, and the chemical properties and changes of natural products prescribe. But, notwithstanding all experience, there are, at the present time many misuses prevalent in the artificial preparation of natural products. There are still, substances containing neither glaire (white of egg) nor phosphorous salts, and in themselves entirely unable to preserve life, as arrowroot, &c., &c., considered as very nourishing.

Bone jelly or gelatine—dissolved as bouillon—is thought by many a good housewife a very nourishing thing, whilst it has long been proved that animals which have been fed on such substances have died of

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hunger. Still, at the present time, they divide the beef into two parts, viz., the one part becomes in excessive dilution prepared as a soup for the table, whilst the other half, or part, as tough fibre, with the glaire almost coagulated by the heat into the most possible indigestibleness, is presented as a nourishing dish to man. We are still presented with eggs baked hard in butter, with fish which has been cooked till it became tender, then hard again, and finally again tender, with vegetables which have lost their vegetable glaire, &c.

I have therefore endeavoured to make my fair readers acquainted with the properties of natural products used as food for man, so that they may not only know how to make a dish palatable, but also which preparation of natural products is the right one, in regard to the general health of man, and which is the wrong one, in regard to his want of health; for what is human life without health?—a mere plague, and nothing else, even if a man had the riches of a Croesus.

Since the following articles were originally designed for the limited space of a newspaper, supposed to be read by all classes of the people, I have endeavoured to keep them as plain and as popular as possible, so that every one might easily understand me, and thus make practical use of every method mentioned in the articles, either in preparing food, or in ascertaining whether any article of food be proper for the daily nourishment of man or not.



## II.

**GLAIRE, AND SUCH SUBSTANCES AS FORM THE FAT OR FAT-PRODUCING SUBSTANCES.**

The value of any victuals for the nourishment of the human body is determined partly by its own solid contents of nourishing material, and partly by its digestiveness. The more nourishing material it contains, the more nourishing it is; the more easily this material can be prepared, by means of the digestive organs of the human body, for transition into the blood, the more digestive it is. However, the value of any victuals is not always determined by its digestiveness, for it may be very nourishing, and yet, at the same time, be very hard to digest; and *vice versa*.

With regard to the digestiveness of victuals, it depends very much how they have been prepared, and how they are masticated by man. Here the art of cooking assists nature, whilst transforming the raw victuals in such a manner that not only are they eaten by man with a certain pleasure, but also become, by the organs of the body, easily consumed, and thus become fit for human nourishment. For instance, the egg—one of the most strengthening of victuals—is, when soft boiled, very nourishing and easy to digest, whilst, by being hard boiled, it is not only hard to digest, but, in consequence of it, adds but little to the nourishment of the human body.

To a normal nourishment, and to the production of the necessary warmth, or animal heat, in the human body, the following substances add the most, viz.: water, glaire substance of all kinds, fat and fat-producing substances, culinary salt, lime and soda salts

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and iron, which altogether are to be observed as the principal elements of the nourishment of man. Those victuals, therefore, which contain these prime elements in greatest abundance, are the most important to man. They are spring water, milk, blood contained in meat and in some sausages, meat in general, entrails of animals, calf's chawdron, etc. etc., white of egg, corn seeds in bread, peeled grains, meal, oats, beer, etc., and legumes in peas, beans, etc., etc. Still, most of these natural products which contain especially much glaire substance, become first, under the assistance of the stomach and the intestinal juice, transformed into a mass which resembles fluid glaire. Then they become, by means of the stomach (*rectus intestinorum*) through the absorbing vessels, transferred into the blood, where, by another process, they become converted to flesh and blood. It is well to observe here, that the more fluid and finely masticated the said victuals are introduced into the stomach, the more digestible they are. Whilst the substances belonging to the animal kingdom have a highly nutritive value to man, among the products of the vegetable kingdom only the legumes and the seeds of corn can claim about the same value, whereas the green vegetables, and other vegetable substances, contain far less of valuable human nourishment. Besides the glaire substances, the fat producing victuals are of importance for the support of the human body. These possess the great advantage, that they become easily worked up and digested in the body, and besides the formation of fat especially serve for the foundation of all textures (tissues), as also for the development of the

indispensable animal heat. It is, therefore, quite an erroneous and blamable opinion, which, I am sorry to say, is still very extensively prevalent, to suppose fat dishes or fat substances in general, to be in themselves hurtful, for they are just as necessary for the health of man as the fresh air. We do find fatty material with meat in general, with butter, yolk of eggs, liver of geese, cod liver oil, marrow of bones, especially in meat soups, and in the oils of vegetables of all kinds, as olive, poppy, rape, almond, and linseed oil.

Besides these, there are the following substances similar to fat, well worthy of consideration, viz., sugar of milk, honey, and sour milk, or vinegar of milk. Milk sugar is to be found in milk—that of horses contains the greatest quantity of it; then follows, as to solid bulk, the milk of woman, and that of cows contains the least of it. When the milk turns sour, the milk sugar changes itself into milk vinegar, and afterwards, by means of fermentation, into alcohol. On this depends the mode of preparing, viz., by the addition of sour milk, the so-called Araca, which the Asiatic people of the desert love so much. In the human body itself, the milk sugar is formed out of the sugar taken with victuals and starch. To the vegetable substances similar to fat belong the starch which is found in potatoes, the grains of all kinds of corn, the legumes, Iceland moss, sage, etc. Further, the sugar, the vegetable jelly in the soup of the fleshy fruits and roots, the vegetable slime in linseed, marsh-mallow root, caragen moss, etc.; the gum or gluten, which, however, is only to be found in small portions

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in vegetable victuals ; the alcohol, which is to be found in wine, brandy, Jamaica rum, arrack, cognac, cherry water—called cherry wine—and beer ; the acetic acid in wine, fruit, corn and brandy vinegar ; the acidum lactus, contained in the German sour-kROUT, and in sour pickles ; and finally the vegetable cellular texture, which, however, is indigestible by man.

Now, since it is impossible that the above-mentioned victuals, which are similar to fat, if they are taken alone, can nourish the human body, but much rather that the taking of them has only some degree of value, if they are taken by man in connection with species containing glaire and some other substances, it would be quite wrong to declare, for instance, potatoes, sugar, sago, arrow-root, etc., of themselves alone to be sufficient food for the maintenance of the human body. Any reasonable man will rather perceive that, with such substances alone, fatness may be gained, especially by children, but that this takes place only at the expense of the production of blood, and by this means a nourishment is produced which will surely lead to sickness, such as scrofula, rickets, and similar diseases.

## III.

## WATER, MEAT.

As already intimated, such victuals especially are necessary to a perfect, natural nourishment of man, as contain water, certain salts and iron.

The water which constitutes three-fourths of all the component parts of the human body, is, for the maintenance of the same, just as necessary as the cook-salt, which is contained in all the solid and fluid parts of

the body. Now, since these two substances are not present in sufficient quantity in the common victuals, all food ought to be properly salted, and man ought to drink plentifully. For a man who drinks sufficient water after meals, digests his victuals much more easily; and, in a great many cases, when water is properly used, it exercises a beneficial influence on the human body as a medicine, especially, since through water many other salts, which are necessary for the maintenance of the bones, muscles, etc., of the body, are introduced into it. Hence, it follows, that the most salutary meal must be one consisting of both animal and vegetable substances, that they may mutually aid each other, and that man should just as little venture to eat the most nourishing animal substances alone, as a meal consisting entirely of vegetables.

One of the principal victuals for man's nourishment is meat (flesh of the various kinds of animals), for it contains all those elements of which our body and our blood is composed. In its full extent, however, this is only meant in regard to the higher class of animals, especially the graminivorous mammalia, since the meat of fishes, lobsters, snails and oysters, has less nutritive value for the support of the body than that of the animals before mentioned. Besides the muscle fibres and the flesh soup, which are to us the most important elements of animal food, the cellular and sinewy textures, the fat, the vessels, and the blood of animals, are very nourishing to man.

The flesh of all fattened beasts has substantially one and the same composition of its elements; only that the particular sorts of flesh are distinguished from

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each other by the proportional mass of their compo-  
 nent parts, and by the properties of the fibres, so that  
 on this composition depends the greater or less nutri-  
 ment and digestiveness of the flesh of different ani-  
 mals. We do not venture, however, to believe that  
 the fleshy fibres have a high value in the way of  
 nutriment for man, notwithstanding their chemical  
 composition, which fits them for nourishment; they  
 are, on the contrary, much less digestible, and, as we  
 believe, less nutritious. However, these two proper-  
 ties become regulated partly by the nature of the flesh,  
 and partly by its preparation by the art of cooking.  
 The softer and looser the meat or its fibres are, in their  
 raw state, and the better and the more suitably they  
 become prepared, the more digestible and nutritious  
 they are. The flesh of young animals is far more  
 soluble than that of old ones. Therefore, with regard  
 to the latter, it depends much on the art of cooking,  
 whether the meat will be soft or hard. In order to  
 cause the flesh to become soft and tender, it ought to  
 be laid for a while in vinegar or sour milk, or to be  
 exposed for some time to the fresh air. Flesh which  
 has been boiled away to soup, and thus has become  
 deprived of its soluble and digestive elements, as well  
 as smoked, salted and dried flesh, is a less valuable  
 kind of food, because, by means of these operations  
 its fibres have become harder, and therefore more in-  
 digestible. Baked, as well as boiled flesh, is in gene-  
 ral more easily and quickly digested than raw flesh  
 (about an hour or half an hour earlier), since the  
 boiled or baked flesh allows the juice of the stomach  
 to enter more quickly into its interstices.

Besides its fibres, the flesh contains its liquid part or flesh juice, which consists of water and glaire substances, and forms an essential part of its nutritive properties, and by boiling the flesh in water produces bouillon or beef broth, as nourishing as it is easy to be digested. The bouillon contains the produced gelatine or glaire substance, the alcoholoid extract or osmazom, the watery extract, or zomidin, and the fat of the flesh. Beef broth without fat is one of the mildest articles of nourishment for man's food. It is best adapted for the uses of very much exhausted patients when convalescent ; however, if used in great quantities or concentrations, it will have a certain irritating influence on the system of the vessels, and easily cause congestive troubles. This, however, may be less expected from the broths or bouillon of white flesh, that is, the flesh of the calf and of fowls. People may eat it either pure, or mixed with wine, floury substances, or yellow of egg, etc. To these components of flesh, containing azotic gas, is added the fat of flesh, which, as an important article of food, being entirely free from azotic gas, increases the value of the flesh very much.

The flesh of young animals, though easier to digest, yet is less nourishing than that of older ones. The flesh of wild animals, which subsist on vegetables, is richer in blood and extractive substances than that of domesticated mammalous animals, and, in consequence, is of a darker color, and from its nutriment, consisting partly of aromatic forest herbs, has a more spicy flavour than that of tame animals, except those whose pasture is in hilly countries, where they find

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more aromatic food. The flesh of birds, especially of older ones, is more dry and poorer in liquid elements, but more rich in glaire and extractive substances than that of the mammalous animals; the softest is the flesh of the tame fowls.

The flesh of fishes is very rich in water, and, at the same time, in glaire substances, but it is poorer in fibres. The fatter fish are easier to digest than the meagre ones. The flesh of the crab and the lobster is white and tough; however, contrary to the prevalent opinion among many, just as little nourishing and digestible as that of the oyster, the flesh of which consists almost wholly of glaire.

The intestines of animals, as, for instance, liver, kidneys, brain, lungs, melt, as well as the sausages prepared partly from them and the blood of animals, are also very nutritious, since they are more or less rich in blood, glaire and fat.

## IV.

## PREPARATION OF FLESH IN GENERAL.

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The preparation of flesh is of especial importance, as well in regard to nutriment as to digestion. A chief requisite in the preparation of all flesh is, that the glaire which it contains, may be preserved as liquid as possible, because only in this condition is the meat easy to digest, and nutritive. In order to obtain this, it is necessary that the meat should be dipped into boiling water, or be basted with hot fat, in order that it may quickly form itself a crust of conglutated glaire on its external edge, which prevents the glaire

of the whole from coagulating, and the soup or strength of the meat from escaping.

The most nourishing, therefore, will be such meat as has been prepared by baking; since, by this process, all the nutritive elements of it remain together, that is, when the cook does not forget to baste the meat diligently with hot fat or sauce, and the frying continues not too long by too hot a fire. Many a good woman and cook is of the opinion, that by the basting of meat with hot fat, the latter penetrates it, and thus makes it more tender. But this opinion is quite an erroneous one, for the purpose of basting the meat often, is only to form quickly on the external edges a brown crust, in order to prevent the escape of fat and other components of the raw meat, so that it may remain more tasty and juicy. According to the same principles ought the flesh to be prepared by boiling, if we wish to have it juicy. The flesh which is to be boiled, ought to be at once put into boiling water and immediately brought to extreme heat, in order that the glaire of the part which is nearest to the surface of the meat may coagulate quickly, and thus the liquid of the meat and its fat may remain in it. Of course, this can only be done at the expense of the beef broth; for if we want the broth to become of the greatest possible strength, without any regard to the further condition of the flesh, it must be cut into small portions and put on the fire with cold, instead of hot water, and thus boil gradually on a slow fire. By this means, the gradually boiling water penetrates the meat gradually, and dissolves all its nutritive elements, and brings them into the soup,

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which by this means, becomes very nourishing and strengthening, whilst the flesh, however, becomes very tough and tasteless.

These are little artifices, which, because they are not sufficiently observed, are not known by all housewives or cooks. The steaming of meat in covered vessels with little water, is a medium between baking and boiling, since thereby the preparation of the meat is performed by the gradual evolving of steam out of the water. If it is done by adding butter and fat, the dish will be more valuable and juicy, and thus it is called stewed meat.

About the salting and smoking of beef, in regard to nutriment and digestion, I have already made some remarks, and will afterwards speak of them again.

A pound of beef represents about the nutritive value of three pounds of wheaten bread, and with regard to the digestiveness of the different sorts of flesh, the following is the relative proportion :—

Next the flesh of birds and mammalous animals, come fishes, amphibious animals, and, finally, lobsters and oysters. Of especial influence on the condition of flesh is the manner of killing the animals. That by which the greatest quantity of blood remains in the flesh, is always the best one; because the flesh thus remains more loose and tender, and also more nutritive and easy to digest, which difference shows itself distinctly in butchering and hurrying.



## V.

**MILK AND EGGS.**

Milk is, by virtue of its composition, indisputably one of the most valuable of victuals, in regard to the nourishment of man. For even milk, taken alone, is sufficient to maintain the human body, especially in childhood, and to nourish it perfectly. It contains all the elements of which the body itself is composed.

The principal elements of milk are water, casein, or curd, fat (butter), milk-sugar, salt and iron. The proportional mass of these substances is, of course, different in the different sorts of milk, and changes itself especially according to the different herbs on which the animals from which the milk originates, have sustained life. The milk of the cow, and that of the goat especially, are in common use. That of the cow is rich in casein, butter and salt, whilst that of the goat contains less of casein and butter, but more milk-sugar than that of the cow.

The souring of milk that has been exposed for a certain time to the air, is caused by the formation of milk-vinegar from milk-sugar, since the oxygen from the atmosphere combines itself with the sugar. A quick artificial coagulation may be produced by adding some tartar or tamarinds to the milk; and the way to prevent milk as much as possible from becoming sour or coagulated, is to boil it, and to keep it away as much as possible from the atmospherical air. During the process of boiling the milk, a skin will be formed over it, and this skin, as long as it is not burst on the surface of the milk, retards its becoming sour, since it prevents the air from penetrating into it. A

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good thing also to prevent milk from souring is, to add a small quantity of soda to it during the process of boiling—about two grains of soda to a quart of milk. For the rest, sour milk is just as useful for human sustenance as sweet milk, because it contains in that state just the same elements, except that it has lost the greater part of its solid contents of fat; for which reason, although it is somewhat less nourishing than fresh or sweet milk, yet it is a more cooling and agreeable drink, and to be recommended to people afflicted with consumption, jaundice, &c.

The watery part of milk, which is retained after the fat and casein have been taken away from it, is called whey, or serum lactis. They are divided into sweet and sour whey, serum lactis dulcificatum et serum lactis acidum; the one is prepared by an addition of acid to milk from which the cream has been taken off, and the other by an acid fermenting of the same. In order to obtain a pound of sweet whey, there may be added half a dram of purified tartar to sixteen ounces of milk from which the cream has been taken off, and which has not been boiled; the acid combines itself in this way with the casein, and separates the same. Sweet whey is an easy and nourishing drink; it increases all secretions, and improves the separation of the gall very much.

Regarding the nutritiveness and digestiveness of milk in general, very much depends on its contents of cheese and butter; the more it contains of these substances, the more nutritive it is; it is, however, less digestive, and vice versa. The poorer the milk is in cheese and butter, the easier it is to digest, but the

less nourishing. In order to make milk easy of digestion, I would advise the reader always to use it in combination with some bread or other victuals, since by this means the casein or curd of the milk divides itself more easily in the stomach. Taken in general, the milk of the cow is more nourishing than digestive; for which reason, for a weak stomach, good beef broth, or eggs soft boiled, are to be preferred to milk, or any preparation of milk. However, a man poor in blood, ought to take a good deal of milk, since it is adapted to produce much good blood in the body.

After milk and flesh, eggs are to be considered as the most valuable food, because they are not only very nutritious, but also, when well cooked, very easy to digest.

Civilized nations use only the eggs of tamed birds, as hens, ducks, geese, turkeys, &c. Less civilized nations eat also the eggs of all other birds and amphibious animals, turtles, &c.

The egg consists of four principal substances, viz., the shell, the thin skin which lines the inner part of the shell, the *glair*, or white of egg, and the yolk.

The shell, with its thin skin, contains about 10 per cent. of the weight of an egg, the white of egg over 60 per cent., and the yolk about 30 per cent.

The shells of eggs, *Tutamina ovorum*, contain 97 per cent. of carbonic acid lime, 1 per cent. of phosphoric acid lime, and phosphoric acid magnesia, and 2 per cent. of animal substances, including some marks of sulphur and iron. They are only in use for medicinal purposes.

The lining skin of the shell, *Pellicula ovi*, consists of concreted alumen, and a few traces of lime salt, and is also of some use for medicinal or surgical purposes.

The white of egg, *albumen ovi*, is a clear, colorless substance of a jelly-like consistence, without smell, and almost without any taste, it is soluble in cold water, but when coagulated by heat, almost insoluble. It contains 85 per cent. of water, 12 per cent. of albumen, from 2 to 7 per cent. of substances similar to human saliva, and from 2 to 3 per cent. of iron.

The yolk, or yellow of egg, *vitellus ovi*, is a thickish fluid of a yellow color, and agreeable mild taste; it contains from 55 to 56 per cent. of water, about 17 per cent. of albumen and casein, the so-called vitellin, and a great number of small fat globules and bubbles. These little globules contain much liquid fat, phosphor and iron salts, and are like the milk and butter globules.

Now, since the egg combines all necessary substances in itself, as a material foundation for the formation of perfect animal forms, it is easy to perceive that it must be a very concentrated article of food, containing all the elements which are necessary for the proper nourishment of man. About its digestibleness for the stomach, I have already made the necessary remarks.

Fresh eggs may be saved from spoiling for a long time, if the outer shell is covered with fat, plaster of Paris, collodium, &c. &c., and thus made impenetrable to air and water, by which means we prevent the hydrogen of the atmospherical air from spoiling the

albumen or white of the egg. In order to ascertain whether an egg is fresh, or not yet spoiled, there are several means to be recommended, of which the following may prove to be of advantage.

When you buy eggs, put every one in the hollow of your hand, and hold it either toward the sun, or towards any other light, in such a way that the eye may convince itself whether the egg be clear and transparent. If, on this occasion, it proves a dark, opaque mass, you may be sure that the egg is spoiled. Another proof of good eggs consists in this,—when the pointed end of the egg feels cold, when touched by the tip of the tongue, whilst the other end is lukewarm, &c.

The preparation and use of eggs, in combination with other victuals, are very various. There may be made of eggs a number of most nutritious and savory dishes. Every good housewife, I am sure, is well posted up in the preparation of them; we will therefore turn to other victuals.

## VI.

### BUTTER AND CHEESE.

Butter is the fat, cheese the glaire of milk. How they are obtained, is well known to all farmers and housewives.

No butter, even the freshest, is quite pure; it always contains more or less buttermilk, and casein or curd in a coagulated condition, and some mechanically intermixed whey. By this the butter becomes more tasteable and nourishing.

As has already been observed in the article on milk, the good taste of butter, as well as its firmness and

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color, depends especially on the food of the animals from whose milk the butter has been made. Besides this, the season of the year, as well as the mode of its preparation, has a great influence on butter.

The more abundant butter is in casein or curd, the easier it will spoil, and get a rancid, disagreeable taste. Therefore it is very necessary that butter, during its process of preparation, should be clear and well washed and salted, in order that it may keep for a long time. It is also better preserved in vats, tubs, &c. It is called in this state vat or tub butter, in distinction from fresh butter.

It not unfrequently happens, that the butter is adulterated, in order that it may weigh heavier, which is very fraudulent. It is done first by imperfect washing, by which water and curd remain in it, or by too strong salting, since salt is much cheaper than butter, or by adding heavier substances to it, as flour, starch, chalk, &c. One is just as unlawful as the other, and deserves punishment, if detected by the authorities.

Butter should be kept either in good porcelain or in glazed vessels, not in metallic reservoirs; and all acrid or pungent substances ought to be kept away from butter, and the vessels where butter is kept in should be put in dry, airy places, for it imbibes any strange smell much easier than any other article of food, and therefore becomes of a disagreeable taste.

Like eggs, butter is very apt to make most victuals more palatable, and is almost indispensable in many preparations of victuals, although in more southern climates, and countries poor in butter, the people

often use instead of it, fat, oils, &c., for the preparing of their food.

Cheese, which is obtained from the curd of milk, with the addition of a greater or less quantity of butter, milk-sugar, and other constituents of milk, is, as already pointed out, obtained from coagulated milk. There are fat or rich cheese, and meagre cheese, soft and dry, the one obtained from cow's milk, the other from that of the goat. There is also sour and sweet cheese, according to the milk which is used for it having either become coagulated naturally by the hydrogen of the air, or artificially by acids.

It is true cheese is nutritious, but only a very strong stomach is able to digest it perfectly, especially when the cheese is hard and very fat, because the gastric juice is hardly able to penetrate it and work it up. Therefore, cheese is the harder to digest the harder it is itself, and the more fat it contains. Old cheese of a disagreeable smell, in which are mites, or which is covered with red mouldy mushrooms—in which the curd has passed into putrefaction—acts more excitingly as a spice upon the stomach, and besides this, on account of manifold disagreeablenesses, which render it unpalatable, is not at all to be recommended for frequent enjoyment.

Sometimes there develops itself in such cheese, by some peculiar process of fermentation, the so-called cheese poison, which is apt to create vomiting, nausea, fainting, and even sudden death.

In general, the wrongly prepared cheese is especially the one which causes those unfoldings or poisonous appearances. It is not always necessary that

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the preparing cheese should become old in order to unfold that poison; sometimes it unfolds itself very quickly in the fresh casein freed from butter. All soft cheese which look of a greenish yellow, may be suspected of being poisonous, and such as are of a greasy and tough, or greasy and crumbling consistence, also such as are of a disagreeably sharp or musty smell or taste.

The symptoms which appear shortly after eating poisonous cheese, are, a general feeling of illness, pains in the pit of the heart, and neighbourhood of the stomach, which increases by every pressure, vomiting, diarrhoea in a more advanced stage, headache and dizziness, paleness of the face, trembling of the limbs, and a greater præcordial anguish, &c.

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The next main object of treatment must be, to relieve the stomach of the poisonous substances, and to ease, as much as possible, the irritability of the injured fibres. Next ought to be used an emetic of ipecacuanha, then narcotics, especially opium in combination with neutral salts, &c. ; but it is always advisable to call in, as quickly as possible, a rational physician.

## VII.

### NATURAL PRODUCTS OF WHICH BREAD IS MADE.

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Next to the victuals derived from the animal kingdom, those of the vegetable kingdom are to be considered, and especially the different kinds of corn or grains. Particularly are to be considered valuable as victuals, wheat, rye, barley, millet, which is very seldom used here, but very much in Germany, where it is called hirse, and in Italy, where it is called panci,

buckwheat, oats, and in warmer climates, maize or Indian corn, and rice.

All these productions consist of substances which contain azotic gas, as glaire substances, especially gluten with vegetable slime, and glaire; of such as contain no azotic gas, as starch and gummy sugar, and besides these, of water, some phosphorus and sulphuric acid salts, cook salt, silicious earth, and some iron. The amount of glaire that any corn possesses determines precisely its nutritious value. Thus wheat, with 21 per cent. of glaire, has the most nutritious value, next follows rye, with 16 to 17 per cent., barley and oats, with 14 to 15 per cent, Indian corn, with 13 per cent., whilst rice has only 7 per cent. Rice contains 70 per cent. of starch; rye, oats, &c., about 60 per cent.

Although the method which is now in use to extract flour from the different sorts of corn, is very much improved, there still exists the erroneous prejudice, that the bran must be carefully separated from the flour, in order to have it whiter, and yet the bran contains the most nourishing substance, that is the gluten, which is besides very easy of digestion, and it promotes the evacuation of the bowels very much. In 1860, an acute German, in Dresden, by name Joseph Klemann, discovered a mode of proceeding, by which the bran can be made quite useful, and by which the bread, indispensable for human support, becomes from 10 to 12 per cent. richer in azotic gas, and at the same time cheaper and more palatable, whereas formerly bran was only used as food for the cattle.

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es, maize or therefore more nutritious than barley or oatmeal. The flour itself is made by means of cooking and baking, as well as by the process of fermentation, more tasteful, more porous and digestible, in the form of bread, cakes, pastry, and all kinds of so-called meal-dishes, as puddings, &c., &c.

By means of baking, there is produced on the external edge of the loaf a crust of a pleasant taste, and the small starch grains in the inside are burst, by which the dough becomes more loose and spongy, therefore also of better taste and easier to digest. The most common means to bring about this loosening up of the dough is fermentation, by which the sugar in the flour becomes decomposed by the assistance of yeast, &c., and thus carbonic acid is developed in the form of little bubbles, which loosen and maintain the batch.

We judge of the good quality of the bread, partly by its taste and smell—it must not be too sour, nor emit a musty smell of spoiled flour—and partly by its appearance; it must not contain any little lumps of unbatched flour, not be too soft on its edges, and also its crust must not be burnt, nor too hard, else it will taste bitter.

The flour must, before it is going to be baked, be put in a warm place, in order that it may become of a uniform temperature; the means of fermentation must not be added to it in large quantities: the water which is to be used for kneading must have, as nearly as possible, an equal temperature with the flour, and neither be too cold nor too hot. The dough must be thoroughly kneaded.

All additions, such as raisins, sugar, eggs, spices, butter, &c., &c., must become well distributed in the bread, and the baking itself must take place in a well and equally heated oven, but not too near a large fire, so that the substance of the paste may not become unequally heated. If the bread or paste is to be quite loose or porous, there must not be added to it too much butter, sugar and eggs, and the latter especially must become finely distributed in the dough; the best way of doing which is by twirling and beating up the white of egg to froth.

## VIII.

## LEGUMES AND NUTS.

To the legumes belong pease, as French pease, peas in husks, chickpeas, &c., &c., lentils, beans, as French beans, kidney beans, horse beans, &c., &c, vetches, &c. They are the most nourishing victuals of the vegetable kingdom, because they contain a great deal of glaire and starch. In the legumes, however, besides the glaire, and besides the gluten in the different kinds of corn, the legumin or the casein of the plant, is prevalent. The legumin is a substance similar to the casein of milk, being distinguished from the glaire in that it cannot be brought to coagulation by heat, but by acids, and generally has no phosphorus, except in peas, but sulphur contained in it. Hence the reason is apparent, why persons, whose digestion is not assisted by bodily labor, but who pursue a sedentary mode of life, often become subject to pains in the stomach after partaking of legumes. Just as in the

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different kinds of grain, there must be separated from the legumes the outward indigestible husks, by means of straining or squeezing, so that the little grain of starch may be burst asunder by the heat.

In order to have legumes well done, there ought to be used for the cooking of them only soft water which is free from lime; if this is not strictly observed, they will not boil soft, partly because the lime precipitates itself on the legumes, and thus makes them less accessible by the water, and partly because the legumin itself becomes by lime-salt, especially by plaister (sulphuric acid of lime) indissoluble; consequently hard, or quite indigestible.

On this occasion I take the liberty again to make a few remarks on water, of which I said but little in the especial article on it. Pure water that has no calcareous earth dissolved in it, has, as already pointed out in the former article, the most beneficial effect on the human body. First, it agrees with all victuals, and by no means changes their intrinsic properties, since of itself it produces neither fermentation nor putrefaction; on the contrary, it very much retards both. Secondly, and consequently, it introduces into the blood the nourishing juice derived from the victuals, and conveys it as pure and mild as it can be expected from them. Thirdly, it never becomes superabundant, for everything which would become burdensome to the body by too copious a draught of pure water, becomes, by evaporation, perspiration, and urine, immediately discharged by the proper canals. Besides that, water without calcareous earth and acetic air, acts as a softening remedy. In order

to find out whether we have good water for drinking, we need only put into a glass, filled with clear water, some potash which has been previously dissolved in water free from lime (salt of tartar); when the water, if it is good, will at once assume a milky color, and the calcareous earth, which before was not visible, will drop to the bottom of the glass in little white flakes.

All men ought to be reasonable enough to choose for their proper drink, that is, in order to allay thirst, nothing but water. Water always tastes well, and as already observed, perfectly agrees with all victuals. It elevates the powers of the digestive organs, prevents the production of slime and acrid humors in them, and furthers their evacuation from the body by all means. Water, therefore, is the only drink, which in all sicknesses and diseases, not only may be safely allowed, but is also of great benefit; it allays thirst sufficiently, without aggravating it; and at the same time, does not quench it all at once, but always gives way to the demand of nature for fluids,—when, for instance, acrid humors are in the digestive organs,—until the cause of the thirst is entirely removed.

Next to the legumes may be taken into consideration some nuts, or seeds, containing fat, as almonds, nuts of all kinds, chestnuts, &c., because they are very rich in fat and glaire. Nuts, or seeds of the nature of nuts, contain altogether, a great deal of nourishment for man. They are, in the vegetable kingdom, what eggs are in the animal kingdom, viz., an accumulation of all the powers of that production, which in future may grow up from them.

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Nuts have a mild and nourishing vegetable mucus in themselves, which by means of their oily and saccharine parts brought into one peculiar condition, and combined with a sufficient quantity of moisture, forms itself easily into milk. In order to produce and to refine it, there is a strong mechanical power necessary. This may be done the more easily, when a fluid is used for that purpose, which combines itself easily with the oily parts of the nut. This will take place when good nuts are thoroughly chewed, and the saliva combines itself sufficiently with the mass. Any one who is deficient in saliva ought not to eat nuts.

The greatest amount of milk is contained in hazel nuts and almonds, then follows the French nuts, pistaches nuts, chestnuts, &c., &c., of which the latter sort is the hardest to digest, for which reason, persons of a weak stomach ought not to eat them. Weak or sick persons, as well as children, ought not to eat nuts at all. However, the milk of these fruits, artificially prepared from them, may be allowed, and in many cases proves very wholesome. Really sick people, however, ought never to take them before consulting an intelligent physician.

Bitter almonds do not belong at all to victuals, but rather to medicines. The bitterness of this kind of almonds is also contained in the stones of cherries, plums, &c., &c., and in the peach tree; the leaves also are bitter. People, therefore, ought never to eat them, especially not without previously peeling off the skin from them. Else they will subject themselves to some dangerous troubles, such as cramp of the stomach, colics, strangling, vomiting, and faintings,

which are certainly very unpleasant things. For to most animals, even the next border neighbour of man, the monkey, the eating of such bitter fruits is a deadly, stomach-inflaming poison.

The older the nuts are, the more easily they may become dangerous to the health of man, since then a certain kind of acritude forms itself, viz., the rancidness which finally affects the whole mass. This is especially the case with the French nuts, and the almonds, and still more particularly with the latter. This rancidness is a kind of acid, into which the previously mild parts of oil are converted, and is one of the worst poisons for the human body, although it does not always at once show its bad consequences, if it has not entered the stomach in large quantities, but more easily conveys itself into the juices of the body, infects all the oily parts of the same, and afterwards shows its dangerous power in many ways, by means of high fevers, boils, sore ulcers, eruptions on the skin, and makes fatal other diseases which may not exactly have resulted from it, especially small pox, &c. Every one, therefore, particularly, such as have weak and easily irritated digestive organs, ought to be very cautious in partaking of nuts of all kinds, especially those which are old, and have a sharp acrid taste.

## IX.

### POTATOES, TURNIPS, CARROTS AND BEETS.

Although potatoes possess all the necessary qualities of an article of food, yet they are not so good as might be inferred from their general use, and their agree-

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able taste, because they are very poor in glaire. They consist of three-fourths water, and contain but from ten to twenty per cent. of starch. As used with meat, especially with the addition of fat, and made palatable, they are a useful article of food; but as a means of maintaining the health and strength of the body, or as the only nourishment for the body, they are totally to be rejected.

The potatoe, as is generally known, is a tuberculous swollen root, consisting of a great mass of cellular tissue. Through this tissue is discharged starch-meal in the form of small grains, surrounded by a watery, very little soluble, glaire, and a juice containing a little free acid. The starch-containing substance of the cellular tissue of the potatoe, swells in warm water to a transparent indigestible jelly, which becomes by diluted acid (and most probably, partly by the juice of the stomach), changed into sugar and gum.

Although the few inorganic qualities of the potatoe have no especial value in regard to nourishment, yet, taken in general, potatoes are easy to chew, easily dissolved by the stomach and intestines, and therefore to be recommended, in a good many cases, as nourishment, when other victuals might not be allowed.

However, the potatoe must be fully ripe, before man ought to partake of it. It attains that ripeness, like all other fruit, at a certain time, and before that time has arrived, it is a totally unfit and even hurtful article of food. A potatoe which does not easily burst during its process of cooking, shows its unripeness, and the more when it is here and there sprinkled

## BEETS.

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with greenish spots, smells disagreeably, tastes bitter, and inwardly shows some lumps of mucus.

As soon as the leaves of the potatoe begin to die away, and the seed capsules are large and soft, we may take it for certain that the potatoe has become perfectly ripe. The plant has now finished its business, and reached its destination, and the fruit has certainly attained its full ripeness and quality. But just as little as the unripe or too early potatoe is advisable for the nourishment of man, just so little is one fit to eat, which is already germinating, or sprouting. All germs must be carefully cut away before boiling them, because though they unfold themselves a very poisonous and stupefying substance called solalin, which has a very unwholesome influence upon the human organization.

The little starch-grain in the potatoe, as already pointed out, becomes, during the process of boiling, more soluble, and thus the potatoe is rendered more digestive. However, from the properties mentioned, it is easy to conclude that exclusive nourishment by potatoes cannot be beneficial, either to the good condition of the blood or to the muscles of the body, imparting no strength to them, but only serving to puff them up. This is especially the case in those countries where potatoes are used by the people as the principal sustenance of life, especially in those years when other victuals are less grown, and dear, as sometimes in Ireland and some parts of Germany; and I, as well as many other physicians, have found this confirmed even here in this country, since the appearance of the typhoid fever, as well as some cases of

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typhus during last winter, which had mostly their origin in a want of proper nourishment by the people afflicted by them.

With regard to the preparation of potatoes by the art of cooking, the value of such dishes, as well as their palatableness, depends much on the water employed in boiling. It must be hot, and not in too great quantity, so that the potatoes may boil quickly; since otherwise their watery nature will be more prominent; for which reason potatoes cooked by steam, and those baked in ashes, are much more palatable than those boiled in water. Frozen potatoes, it is true, do not taste as well as those which are not frozen, but they do no harm to the health of either man or animal, that is, as long as putrefaction has not commenced.

Turnips are divided especially into two kinds, the common round white one, and the somewhat long yellow one. Both sorts are easy to digest, but do not, however, possess much nutritive strength. They are sufficient, however, for persons who have not much bodily labor, and furnish a good nourishing juice, especially in combination with other proper victuals. They all help to cleanse the blood, since they possess some diuretic power.

The smaller sort, or the bitter white turnip, in order to be well enjoyed, require strong digestive powers, and temperance, because they have a great tendency to give trouble to the stomach, and since they require a pretty long time for digestion, easily cause flatulence. It belongs, like the potatoe, mostly to sandy countries, where the poverty of nature makes men

labor hard, and thus can easier digest hard food, and just for that purpose lets such victuals prosper the best. Weakly and indolent people must therefore be very temperate in partaking of them.

Turnip cabbage, as well as turnip rooted cabbage, holds pretty nearly the middle place between the before-mentioned kinds of turnips and the carrot; it is a little easier to digest, and more nutritive.

The carrot is a most excellent root. It is more nutritious, because it is richer in mild glaire and saccharine, easy to digest, and, in consequence of its saccharine juice or sugar, an excellent means of dissolving mucilagenous uncleanness of the intestines and of the blood. Besides this, it possesses a peculiar physical power. Among other things, for instance, a poultice of the fresh and raw root applied externally to eating ulcers, or even open cancers, although it may not entirely heal them, will prevent them eating further. Besides that, the carrot exercises a very beneficial influence against a species of worms called *Ascarides*, which, by the eating of raw carrots, especially early in the morning, before breakfast, are carried off. The juice of carrots has also a similar effect, but not to such an extent as the carrot eaten raw. Again, it is a good remedy for the breasts of those suffering from a tenacious cough, combined with phlegm.

Beets are of no great value either with regard to nutriment or digestion; they may, however, do no great harm as a dish, to those who like them.

More real value is possessed by the parsely root, parsnip and celery root, which are easier to digest.

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some acrid qualities, and very often operate more  
as medicine (for which they are frequently used)  
than as nourishing food, and besides that, the celery  
root particularly has sometimes too much influence  
upon the nervous system; for which reason certain  
persons ought not to eat it at all.

X.

AROMATICS OR SPICES, AND OTHER HERBAGE.

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We possess, besides the above-mentioned roots, in  
the vegetable kingdom, in this Province, a whole stock  
of the most excellent and wholesome aromatics or  
spices, up from the weakest to the strongest and most  
pungent. For instance, basilicum, dill, ground-ivy,  
chervil, parsley, anise, tarragon, cummin and carra-  
way, coriander and fennel flower, sweet marjoram,  
pepperwort, thyme, juniper berries, garlic, and other  
kinds of leek, horse-radish, radishes, onions, and  
many other aromatic or strong tasting herbs; some of  
which are seldom and others are often used as victuals.

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Although some among the above-mentioned herbs  
are not raised plentifully in this country in gardens,  
but rather in artificial beds, yet, since they are raised  
here, which proves that they can grow here, we may  
regard them as belonging to the vegetable kingdom  
of this Province. Since, therefore, we can so easily  
get all these aromatics here, which altogether, if pro-  
perly used, promote digestion, drive away flatulence,  
and increase the general evaporation of the body, as  
well as the secretion and evacuation of urine, and  
thus strengthen the nerves, why should we most com-  
monly use the aromatics and spices of foreign countries?

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All such strangers as cloves, cinnamon, Arabic crocus, Spanish pepper, nutmeg nuts and blossoms, cardamon, vanilla, ginger, &c., &c., are altogether too ardent for us, and work unfavorably upon our digestive functions. The frequent use of them induces the blood to run too much towards the vessels of the abdomen, and thus gives rise to such troublesome maladies as hemorrhoidal vein, cramps of the stomach, spleen, or hypochondria, &c., &c. In fact, all the above-mentioned aromatics, and even some of those raised in this Province, are to be considered more as medicinal herbs, than as herbs produced for the nutriment of man, and ought therefore to be used very moderately for the latter purpose.

But although these aromatics do not especially belong to such victuals as are necessary for the nourishment of man, they are very good, however, to improve the taste of certain dishes, and some of them more or less assist the digestion of victuals. The influence which they have on the digestive apparatus arises from their containing in its bark or leaves, and in its blossoms, fruits, seeds or roots, more or less ethereal oil and salts, which support the mucilaginous and salivary secretions of the mouth and stomach, and elevate the latter considerably.

According to their nature and quality we distinguish, for the purpose of nourishment, dry and green vegetables or herbage. To the former belong, besides the legumes, also most of the before-mentioned herbs and aromatics; and since I have already spoken of them in regard to their value, I will now turn to those vegetables, which, like the legumes, &c., &c., with-

out an artificial preparation, that is, by the art of cooking, have very little nourishment, and are hard to digest.

They form, along with meat, bread, and eggs, the daily fare of most of our people in this Province. They are hardly to be considered as nourishing, but rather as satiating elements for the support of man, and therefore not without some importance. The most digestible and palatable are green vegetables, when they are quite young and fresh. Their most nourishing elements are substances free from azotic gas, viz., gum, starch, sugar, slime or mucus, and a certain vegetable acid. Only sometimes they contain a small quantity of glaire, except onions, which always contain about from 25 to 30 per cent. of the latter.

Those vegetables, which have the least nourishing value, are such as have lain long in cellars, or have been salted, as for instance, the German sourkraut, &c. The principal vegetables of this kind used for the nutriment of man in this Province, are cabbages, viz., garden-cole, white cabbage, savoy, cauliflower, spinach, lettuce, dandelion, &c.

All of these vegetables have much raw element and little nourishment. On account of their raw parts, they ought never to be partaken of except well done, and because they are so very softening, and productive of flatulence, they ought never to be eaten in connexion with too much fat. Especially fat geese, smoked pork, ham, and pork, should never be eaten with them. White cabbage is more nourishing than curled garden-cole, because it has less raw fibres, and

consequently, is easier to digest. The best is the cauliflower; it contains good nourishment, is easy to digest, and is not so conducive to flatulence, especially when eaten without much fat. Spinach is very soluble, and therefore would be a good article of food, and easy to digest, if it were not for its relaxing qualities, for which reason it is not so safe, especially for weak stomachs. There ought to be always taken with it some agreeable spice, but no hard victuals, especially no hard boiled or baked eggs.

All the different kinds of lettuces, dandelion, &c., are mild, nourishing, and easy to digest, when they are well chewed; and are, besides, of a blood-purifying nature. Especially dandelions in spring, and headed lettuce in summer, are an acceptable gift of nature to man, since, particularly in summer, the blood easily becomes thick and full of bilious acrid humour, which condition the frequent partaking of these beneficial vegetable remedies.

A person who nourishes himself mostly on victuals from the vegetable kingdom, ought to drink no ale, and but little wine, since otherwise his blood will become acrimoniated, which leads to serious diseases. Further, he ought not to live in a cold, ungenial climate, or ought to be in circumstances to protect himself against the influences of nature, else his vital powers will soon become weakened, the blood will run thick and sluggishly through his body, and soon create a superabundance of mucus, and thus the man becomes consumptive.



## XI.

## MUSHROOMS AND MOSSES.

The mushrooms and mosses which may serve for the nourishment of man, although they are in little use in this Province, where also they are not found plentifully, belong to vegetables, as well in regard to their nourishing value as to the manner of preparation. The mushrooms, of which especially the truffles, or earthnuts, morel, champignon, stone-mushrooms, Goat's beard, or Goat marjoram, and some other more or less known kinds, fit to be eaten by man, contain starch, sugar, mucus, and jelly, but more glaire than other vegetables, phosphoric acid salt, and a certain mushroom acid. Taken in general, mushrooms are, in consequence of their chemical composition, more nourishing than the other green vegetables, and if well prepared by the art of cooking, most of them will not be hard to digest.

However, it must be especially noticed, that there are mushrooms, particularly among the few species found in this Province, which are really poisonous, and apt to exercise a stupefying influence upon man and beast, and also some other kinds, although in other respects harmless, yet from having grown on certain places, or from having become over-ripe—since in no plant does putrefaction commence more quickly than in mushrooms—easily imbibe poisonous elements.

Now, in order to ascertain whether mushrooms are really poisonous or not, the following simple means may prove beneficial to those who desire to have a dish of that plant. If a good housewife wishes to

prepare mushrooms as a dish for the family, let her boil with them one or two onions, which have been previously peeled, and if these onions assume a black color during the process of boiling, she may be sure that there is certainly some poison in the mushrooms. For the rest, no person ought to gather or collect mushrooms, or any other plant, either for the purpose of nourishment or for medicinal use, or in order to sell them to others, who has not previously obtained a good knowledge of botany, or has at least asked some one who understands such things, concerning the means by which poisonous plants may be distinguished from others; for smell and taste is not always and alone sufficient for this purpose, but sometimes even dangerous.

The vegetable kingdom contains, besides mushrooms, a great many poisonous plants, which in outward appearance are similar to such as are in use for the purpose of human nourishment. For instance, hemlock (*cicuta virosa*) might be mistaken for chervil in the preparation of victuals, henbane or hogsbane for parsnip, and a good many other plants which are poisonous. The poison of these plants, if taken, will soon show its dangerous consequences, viz., dizziness of the head, dryness of the mouth, pain of the stomach and of the limbs, dimness of the eye, &c.

Now, as soon as a person is taken by the above symptoms of illness, and is supposed to have eaten something poisonous of the above kinds, a physician should be immediately sent for. Meanwhile, the persons around the patient may give him as much buttermilk to drink as he can swallow. If that can-

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not be had, let him take fresh or sweet milk, and if this also is wanting, let him take tepid or luke-warm water, as much as he can drink. Between this there might be administered a few table-spoonfulls of good fresh oil, not rancid, then again buttermilk, milk, or lukewarm water, and again oil, and so forth, until vomiting takes place, or the physician arrives, in order to administer more powerful medicines, according to the state the patient is in.

Mosses are in no great use among the people, with the exception of the Iceland moss as a medicinal preparation, and the so-called Irish moss, of which women, by addition of milk and sugar, are accustomed to make a kind of cooling jelly, very much liked, particularly in the United States, where it is called blanc mange.

This is both a most excellent and wholesome nourishment and refreshment for man, because of its solid content of mucus, which, in combination with milk and sugar, is not to be despised.

## XII.

### FRUITS IN GENERAL.

Under the name of Fruit is to be understood all the fruits of tendril-plants, shrubs, bushes, and trees. All of these fruits need no particular artificial preparation, after they have been prepared by nature; that is, have become ripe, to render them palatable. These fruits may be divided into two principal kinds, viz., kernel fruit, and stone fruit. Each of the two kinds is an excellent and wholesome food. The kernel fruit, to which belong all apples and pears of a cap-

sular nature, the chalice, pumpkin, and husk fruit, of which latter kind, belonging to the legumes, I have already spoken under that head, since that fruit is seldom partaken of by man in its natural state, embrace in general, all such sorts of fruit, as, instead of stones, have kernels in their capsules. All of them contain more or less soluble glaire, plant-fibre, sugar and vegetable gum, called gluten, and are, on the whole, more nourishing than the stone-fruit.

Among those which grow in this Province, are the following most used by man : garden currants, gooseberries, raspberries, strawberries, and blackberries ; and among those mostly imported from other countries, the following are most liked and in use : wine-grapes, figs, pumpkins, melons and cucumbers ; which latter are also raised by the people of this Province. Now, the fruits which grow or have been raised in this Province, are far more nourishing, and easier to digest than those which we import from other countries, with the exception of grapes. They are altogether excellent means to purify the digestive organs from accumulations of bad mucilaginous trash, and to purify and dilute the blood. They promote the circulation of the blood, and act as excellent diuretics ; both which operations, just at the time when nature has ripened the above-mentioned fruit, are especially necessary, for certain reasons. For most persons they are real refreshments. However, I would advise such people as have an irritable stomach, or in general very sensitive nerves, to be cautious in the enjoyment of that fruit, since it is apt sometimes, especially when eaten with an empty stomach, to cause in such

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persons nausea, vomiting, and eruptions of the skin, &c. Still this lessens not by any means the value of those excellent fruits, but prove clearly that they possess medicinal powers; on the contrary, their quieting, cooling, blood-diluting influences, render them a very advisable and beneficial food for sick people. This is especially meant of the juice extracted from garden currants, raspberries, and much more of that from that noble fruit called black mulberry, which, however, I have never seen in this city,—partly pure, partly mixed with water. These are unparalleled means in all kinds of fevers, where heat and thirst so much trouble the sufferer. Sometimes there is hardly any other medicine necessary than the juice of these wholesome fruits. Every good mother of a family, therefore, should, if possible, take care to have them always at hand in the house.

Among those fruits, which grow better in warmer climates than that of this Province, is the wine grape, the finest of all; a great, invaluable gift of nature to man. Although grapes may not serve exclusively or exactly as a nourishing food, still they possess some other very useful qualities. They are adapted to regulate the bilious contents of the digestive apparatus, even if those contents have almost gone into putrefaction; they thin and purify the chyle or juice of the body by their diuretic power; they promote the activity of a sluggish stomach, cause neither flatulence nor any other uneasiness, and refresh, with their ardent power, the whole nervous system of man. This refreshing power soon transfers itself into the blood, and its vital spirit becomes more lively and

quick, so that the blood of a man who partakes of grapes, frequently possesses, and therefore can give, a great deal per cent. more easily, more spirited and animated elements to the canals of the more noble organs of the body, than any other man who enjoys not wine-grapes.

The reason for all this is, that wine grapes make the whole man more brisk, jovial, and in all undertakings more lively; secretion and excretion of all kinds become promoted by them, and therefore we may be really thankful to nature for the beautiful present which it has given to us in the wine grape, and cultivate them wherever it is possible.

The fig is in its solid contents very much like the plum, though the latter belongs more to the stone-fruit, only it possesses still more power than the plum to promote the evacuation of the bowels. However, figs must be far more moderately enjoyed than any of the before-mentioned fruits. All hypochondriacs, and such as suffer from habitual costiveness, will find in this fruit a very good means to remedy that trouble, if they but eat one or two of them in the morning before breakfast.

Pumpkins, as I have already pointed out, ought never to be eaten before they have been prepared by the art of cooking, either as a pulp, a soup, or some other dish. Although easy to digest, and somewhat nourishing, still it will always soften the stomach; therefore, it might be well always to add to a mess of pumpkins, half or three quarters of rice for instance, and also some spices, in order to make it more suitable for the intestines.



Of as softening, but of a much more cooling nature, is the melon. Its juice, it is true, is really excellent for thinning and purifying the blood, and it gives fine nourishment;—however, for the people of this climate, it has not been created, no matter of how much use and value it may be, and is, to people of a warmer climate. Besides that, the melon is dear, and as a production of foreign countries, belongs, among our people, to the so-called dainties, and is mostly eaten when hunger is already satisfied by other victuals. The poor man is scarcely able to purchase melons, and the rich man who takes such dainties on a stomach quite full, commits a foolish action; for what may be called greater foolishness than to weaken, by so softening and cooling a fruit, a full stomach, which has already enough to do to work up all that has been eaten before.

Nearly the same may be said of the cucumber, which is also a production of this Province. Most persons eat cucumbers before they have become ripe, which is another very foolish thing. The principal virtue which this fruit possesses, is, it purifies the blood, but it contains very little nourishment, and is hard to digest; therefore, people of a weak stomach ought not to partake of it at all, and stronger persons only moderately as a side-dish. A great deal more might be said concerning cucumbers, as well as the fruits above mentioned, especially apples and pears, and some others, which are very wholesome and nourishing, and easy to digest, and of which I have not spoken. However, as these articles are written more for the purpose of directing the attention

of my readers to the high importance of the solid contents of natural productions, which are commonly consumed, than to give a thorough explanation concerning them, I take the liberty to turn now to the stone-fruits.

Among those we may reckon, as growing in this country, the different kinds of plums and cherries with their varieties, and those which we mostly get from other lands, as peaches, apricots, tamarinds, &c. The pulp of these fruits contain little soluble glaire, but much cellulose and dye matter, pectin, gluten, sugar, acid, salt, and water. Stone-fruit in general, as already remarked, is less nourishing than kernel fruit. Among them all the plum is the most nutritive, because it contains the most gluten; and dried plums especially, if they become properly prepared by the art of cooking, have a most beneficial effect on human health. They are always a good remedy for costiveness, since they help to open the bowels; for which reason a good housekeeper should have them always in the house.

Cherries, especially the sweet ones, are the next most nutritive and wholesome of the stone-fruits. Persons inclined to thickness of blood, melancholy, hypochondria, jaundice, and in general all persons of a peevish temperament, ought to eat plenty of fresh and sweet cherries, during the season when they can be procured. In order to prevent flatulence, which sweet cherries sometimes cause, it is advisable, after having partaken of them, to drink some water, but no wine or any other spirituous drink; and care must be taken not to eat them before they are fully ripe.

Peaches, as well as apricots, when fully ripe, are also beneficial fruits. However, they belong to the same family as almonds, on which I have already made some remarks; and thus the leaves of the trees on which they grow, the skin, and the kernel in the stones of the fruit, contain a bitter transient element, which has a great influence upon the nerves. This element causes, in some persons, pains in the stomach, colic, &c., and, if taken with the fruit in large quantities, has even the power to destroy life. However, that need not prevent us from eating them: we can peel them before eating, and there is no necessity to crack the stones and eat the kernels at all. It is also an error that the enjoyment of these fruits, as well as of some others belonging to the same family, would cause dysentery, if eaten in the same months in which they have become ripe.

Dysentery, which may be easily and quickly remedied if a physician is called in early enough, does not originate from a person's eating too many peaches, &c. It rather has its origin in the sharp elements of the blood, which, during the summer heat, especially in the month of August, have formed themselves in the chyle of the body, and now, during the day, by the sometimes severe evaporation of the skin, become driven away quicker than usual, and, since the nights of such days are sometimes cool, nature puts a sudden stop to its escape by the pores; hence the revolutionary elements seek at once another passage by way of evacuation. This way is through the intestines, and, in order that this evacuation of ugly and angry elements may proceed the more certainly

and easily, and those distressed by them may be the more quickly relieved, the good God has provided for us just about this time, the above-mentioned fruits, which promote those evacuations very much, but certainly do not cause dysentery.

## XIII.

**CONCERNING THE SEASONS IN WHICH CERTAIN VICTUALS ARE THE MOST EXCELLENT, PLENTIFUL, AND WHOLESOME.**

As already observed, the good quality of any victuals is the principal guarantee for their digestiveness, nutritiveness, and savouriness. Every good housekeeper, therefore, should be fully acquainted with the season when victuals are the best, cheapest, and healthiest, and choose their kitchen store accordingly, especially the meat. This is, indeed, a matter of the highest importance, and if it were not so little and so seldom taken into consideration, there would not be half so many people sick in our days as there are.

Dyspepsia, or weakness of the stomach and digestive apparatus, has its origin, principally, in a disorderly, bad, unseasonably chosen diet, in gormandizing, and in the excessive indulgence in warm drinks, especially tea and punch. Every physician who has had the opportunity and the capacity to direct his whole attention to this particular disease of man, from which a great many other illnesses and diseases proceed, will have discovered that the principal origin of it consists of the gastric uncleannesses of the stomach, as slime, gall, and acidity of all kinds; and thus, by choosing such remedies only as possess the quality of

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cleansing the bowels of such bad substances, he will generally have met with success, and have restored his patient to health again. Besides, it is a well known fact to real physicians, that dyspepsia seldom attacks man in one and the same shape or form, always, however, about one and the same season of the year, and certainly all such persons as are not acquainted with the difference between victuals, and the season in which they are the most wholesome to be enjoyed. Of course the process of life would go on within a comparatively narrow space, if a man confined himself entirely to the enjoyment of certain victuals at certain seasons, and thus there would be produced about the same trouble as is produced by a diet improperly and unseasonably chosen. This is exactly the case in our city; at one time we can find almost nothing but beef, at other times nothing but pork, and vice versa; and I recollect very well times when the relatives of one or another of my patients for whom I had ordered veal, looked in vain for that kind of meat for a whole fortnight, whilst pork and beef were to be had in plenty.

On the other hand, however, according to the laws of nature, habit or custom contribute a great deal to prevent a good many unseasonably chosen victuals from doing any greater harm than those already spoken of. In habits and customs rest many great secrets, and especially this, how it can happen that the human organism possesses the capacity of indulging in, and enduring certain things, which no rational man in the abstract would commit to it. Neither the hut of the poor man, nor the palace of the rich, neither the polar nor

the tropical regions, nor the temperate zones, neither the culture of the European, nor the natural condition of the inhabitants of the South Sea Islands, offer the most exclusive stipulations in regard to the unfolding and progress of life. Life prospers there as well as here; it prospers by small means of nourishment as well as by richer means; it prospers in the idle man as well as in the active one; in men who labour in coal mines, or in arsenic huts, as well as in those who labour under God's free sky, surrounded by the most wholesome influence of a pure vegetation and air. Of course, that it not unfrequently progresses in one or another organism, at the expense of its being and continuation in general, is also a fact which cannot be denied.

Now, following the same rule which we have observed when speaking of the properties of victuals, we will do the same now, and commence first with beef; this being the principal food with all of us.

This meat not only possesses the best qualities during the months of April, May, June, and July, but is generally the cheapest about that time, and is the easiest to digest. Further on in summer, when the days begin to get short, we ought not to eat so much of it. Pork should be bought during the months from November until April, since about that time it is not only the most fresh, but also the easiest to digest. During the summer time no pork at all should be eaten, especially no strong salted pork.

Veal may be safely enjoyed by all men through the whole year, but it is not always to be had, and differs very much in its price during the different



seasons of the year. If a person is going to keep veal for a longer time than three or four days, it would be advisable to boil it about ten minutes, and then put it in a cool place. Calves ought not to be butchered before they are six weeks old, else the veal will have very little nutritive value.

Mutton is of the best quality during the months from January till May: it is an excellent article of food during the hot months of summer, but is seldom butchered at that time for several reasons.

Fowls, such as young pigeons, chickens, &c., are the best during the months of March, April, and onward till September, and all other poultry, as for instance, geese, ducks, turkeys, &c., are the fattest from September to February.

Any kind of game is of a good quality and a wholesome nourishment to man from September to the end of January; however, Moose and Roe may be also enjoyed in the summer season, if they can be had.

Butter and milk, in proper quantities, are wholesome throughout the whole year; however, they are most wholesome and nourishing during the spring and summer seasons, because in winter the beast is in want of green and fresh food.

Eggs are generally fresh and good from February till May; in the latter month the brooding of the fowls begin, and therefore about this time a good housekeeper should be cautious whilst purchasing eggs.

The different kinds of fish are the best during the months of October, November, December, January and February, provided they can be caught at these times; except fresh herrings, which are the best in

the months of May and June. Lobsters and crabs are the fullest and most wholesome in July and August.

The strength and quality of the different kinds of drinks, as wines and brandies, depend much on their age, except ale, which is the best from February until May.

All kinds of vegetables are wholesome during the whole year, if they can be had; the first green vegetables come to us in this country about the end of May; cucumbers and beans and peas about August, turnips and other vegetables later, and some vegetables, for instance cabbages, are the last, about the time when it commences to freeze. Potatoes appear, some as early as July, some kinds later; they will keep perfectly savoury and wholesome until the next spring. Mushrooms, some berries, and other fruits are not good before October.

The salting of meat and other victuals for the winter, should not be done before November; and in general, old salted meat should be avoided as much as possible.

The time which is necessarily employed to boil one or another species of food, cannot be fixed precisely, since that depends much on the condition of the victuals, whether they be young or old, and also on the management of the cooking and baking, which has a good deal of influence on the victuals becoming quickly or slowly done. However, with an equal temperature, all kinds of fish may be boiled about one quarter of an hour; beef and mutton about four hours; veal and young mutton from two to three

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hours; geese three to four hours; ducks two hours; turkeys four hours; chickens an hour and a half to two hours; pigeons one hour; partridges an hour and a half; heath-fowl three hours; hares and rabbits two hours to two hours and a half; moose four to five hours; roebuck three to four hours, and all kinds of small birds half an hour, &c.

It must be observed, however, that all the above-mentioned flesh must not be over one year old, for older flesh must be boiled longer. It also makes some difference whether the pieces are large or small, for large pieces want more boiling than small ones. Also, the flesh must not be removed for some time from the fire before it is quite done, else it will get hard and tough.

All floury victuals also must be boiled or baked by a moderate fire, and the cover must not be removed from them before they are done, else they will get hard, and have a dull appearance.

All soups and other fluids, used as by-dishes to other food, must be prepared separately, before they are added to flesh or other victuals, as, for instance puddings; and all remains of boiled or baked victuals which are intended to be kept, as well as the raw victuals, must be kept in cool places, in order to reserve them for the next meal.

## XIV.

## OF DRINKS IN GENERAL.

All victuals in a fluid form, serving in particular for the assimilation of solid food, are called drinks. The general signification of drink is, something to

quench the thirst of man, and supply the watery substances of the blood, which become continually absorbed by means of the process of life. However, they possess, according to each single peculiarity of drink, other different qualifications, as for instance, cooling, warming, irritating, soothing, nourishing drinks, as milk, beef-broth, chocolate; and aromatic or spicy drinks, such as tea, coffee, and other infusions; and all alcoholic or fermented drinks, as wine, beer, cider, brandy, &c. Some of these drinks are of greater, some of less importance in regard to the nutriment of man, because almost the fifth part of the human body consists, in the most strict chemical sense, of fluid substances, and by the more solid victuals, only a small portion of fluids can become introduced into the body.

According to this, all drinks may be different in many ways. One of the most important of all of them is water, on which I have repeatedly made some remarks. And indeed we can never speak of it or recommend it too much. Its chemical composition, and its consequent influence with regard to the health and want of health of the human body, are of the highest importance: without water we should be utterly unable to maintain life. But not only is it the most wholesome and natural, but also the cheapest of beverages, and needs no artificial preparation at all; it is given by nature freely to every man and beast. It contributes essentially to the promotion of the elements of the body, even the hardest, the muscles and bones, and is the means of essentially supporting the process of life; it keeps the juice of all

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victuals and the blood, in a proper state of fluidity; promotes the solution of all matter in the body, and is the means of secretion and excretion. Therefore water is very beneficial for the health of man, and even if taken in large quantities, when not too cold or when the body is overheated, will do no harm.

Water belongs to those fluid victuals wherein all parts are fully dissolved, and in which many other substances are soluble. Imperfect fluid drinks are such wherein a part of the substances of which they consist are in a condition of welling or swelling, for instance, slime or mucus, and oil, or in a mechanical stirring or raising, for instance, parts of vegetables, in marsh mallow tea, or different powders put into water. The first kind is clear, the latter kind more or less muddy.

There are warm drinks and cold drinks, according to the different preparation and temperature. In general, all clear-coloured or uncoloured drinks, prepared principally from water, are known under the name of water, as soda water, and all those prepared from raspberries, gooseberries, sarsaparilla, &c. According to the different kinds of drinks, they receive different names, as for instance, tea, from the well-known plant of that name. The first are mostly taken cold, the latter mostly warm. Acid drinks are called lemonades, made either of lemons, vinegar with sugar, &c.; and when they are mixed with wine or brandy they are called punch, as for instance rum-punch, wine-punch, whiskey-punch, &c. Fluids or drinks prepared from decoctions of grains, by the addition of different bitter-extract holding substances, as for in-

stance, hops, &c., are called beers or ales, and all fermented drinks are called wines and brandies, &c. Fluids prepared by the art of cooking, out of meat, floury or slimy substances, vegetables and fruits, are called soups or jellies; they are taken either warm or cold, with spoons, or in glasses, but especially with spoons, when they are of too great consistency to drink out of cups or glasses.

The preparation of good fluids, either drinks or soups, is one of the principal objects of the art of preparing human food, and will be duly considered in the following articles, with regard to each fluid article of food worthy to be mentioned.

## XV.

### WINE, AND ALE OR BEER.

Wine is the product of the vinous or winey fermentation obtained from sugar-holding juice (Weinmost). It is distinguished from ale,—or beer, as it is called in Germany, Ireland, and Scotland,—chiefly by this, that the latter, which is obtained from the fermentation of an infusion of malt, is brought into a vinous fermentation by the addition of barm or yeast, whilst wine, without this addition, by means of bringing glaire elements into putrefaction, gets spontaneously into a vinous fermentation. According to its chemical composition, wines contain far less of nourishing substances, such as sugar, gum, dextrin, salt, than ale, and also no bitter substances, but more alcohol or spirit of wine, for which reason it is much more powerful than the latter.

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Although wine is in general prepared from the juice of grapes, there are a good many other vinous drinks called wines, partly prepared from country produce, as tree-fruits and berries of our own Province, and partly from the productions of other lands. Especially are apples and pears of all kinds the fruits which are used for the manufacture of wines, since they contain a good quantity of the saccharine element; and among them all, the so-called sweet cider is certainly a beverage not to be despised. All these wines, however, contain far less spirit of wine or alcohol than the wines prepared from grapes; and these again are distinguished from each other according to the country where the grapes grow, from which they have been manufactured, whether in valleys or on high hills, whether in more or less warm or hot latitudes, &c.; and the proportion of alcohol in the wines made from fruits and berries other than grapes, amounts only to 9 per cent., whilst that of the latter reaches 20 per cent. and more.

The alcohol which is contained in wine, acts upon the nervous system and the digestive organs, partly in the way of excitement and animation, but when taken in large doses, it is intoxicating. Hence the greater or less effect of wine depends on its proportion of alcohol, of which the weaker country wines of Bohemia and the Tyrol, and those manufactured either in this Province or in the United States, contain in general about 8 per cent., whilst the more noble Rhenish, Burgundy, Hungarian, and Bordeaux wines, contain from 14 to 20 per cent., and the stronger or heavier-bodied wines, as Madeira, Port, Cape wine, &c., con-

tain from about  $21\frac{1}{2}$  to 25 per cent. According to this, it is easy to perceive that wine may be one of the greatest benefactors, and one of the greatest destroyers of the human race: the latter, especially in those countries where lightness of heart, and spiritual neglect of the people in general has prevented parents and guardians from bringing up children in the proper love and fear of God, and teaching them that temperance and moderation in all things, physiological and psychological, is requisite; that to use to excess any one of the good gifts of God in nature, is a sin against the Creator, and a transgression of his eternal laws given to man's whole nature, a sin which sooner or later will avenge itself on every person who oversteps those laws.

Wine, that is, such as has been pressed from ripe grapes, well fermented, and not too young, is one of the most animating beverages, and most refreshing to the nervous system when taken moderately. The answer to the question, how much a person may safely drink of it, depends very much on the constitution of the individual. And besides, there are some cases,—as when the body is in a state of exhaustion, or the mind is depressed by one trouble or another, or even all the vital energy is in a low state, and almost totally gone,—when wine is even absolutely necessary as a strengthening medicine, and will always prove beneficial.

Persons who have accustomed themselves to wine so much, that they can scarcely allow a day to pass without having their brains soaked in wine,—I mean habitual drinkers,—will certainly weaken their diges-

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tive apparatus more and more. Such persons, perhaps without knowing it, overdose the vital juice of their bodies with combustible elements, acids, and rancid, acrid substances, and enlarge the vessels more and more, especially the tender ones in the softer intestines and parts of the body; for the blood gets agitated too often, and thus they deprive the nerves of their natural sensibility and activity.

As a natural consequence, there follows sooner or later, plagues and maladies of all descriptions, as dysentery, dry and wet hemorrhoidal veins, chokings and vomitings in the mornings, produced by coughs, red inflamed eyes, sometimes even blindness, or the loss of one eye, ulcers, difficult to heal, on the lower extremities, gout, and what is about the worst and most dangerous, delirium tremens or the horrors; and it is sometimes hard even for the most skilful physician to restore the impaired vital powers to their proper activity again.

Ale or beer is a beverage much more widely diffused among men than wine. It is, as I have already pointed out at the commencement of this article, a fermented decoction of grains of barley or some other corn, spiced either by hops or a substitute for them. Before the barley or other corn, however, can be used for the above purpose, it must go through a germinating process in an artificial way, and during that chemical metamorphosis, the elements of spirituous fermentation form themselves; and the more skilfully this is performed, the more solid content or body the ale possesses. But this is the business of the brewers.

Ale is offered to us in extraordinary varieties, and the goodness of each variety depends partly on the skill and honesty of the brewer, partly on the different grain from which it is made, and partly on the kind and quantity of aromatics which are added to it as spices. Hence arise the different names given to it, as for instance, ale, porter, English ale, German lager beer; and in this city, Jones's ale, Doherty's ale, &c. All these different kinds of beer are differently prepared. The main strength or goodness of the beer depends much on the drying of the malt, as the goodness of the wine depends on the country where the grapes have grown; whether this has been performed at a high or low temperature, and whether quickly or slowly. Beer brewed from wheat is far different from that of barley. The first decoction of malt gives a far other beer than that for which the residuum of a former decoction has been used. It makes a great difference whether, during the brewing, there have been used a few hops or a good many, whether these hops have been partly or entirely substituted by other aromatics, resinous, or pure bitters, which contain extractive elements, as for instance, gentian, marsh trefoil, millefoil, centaury, wormwood, quassia, sometimes even aloe, &c.; whether sweet substances have been used to increase its solid content of sugar or aromatic substances, or even stupefying or stunning drugs, as for instance, wild rosemary, opium, the German toll-korn (belonging to the family triandria digynia), which in England is called India berry, in spite of its growing in Europe instead of in India; Farther India berry (*cocculus indicus*) which really grows in the

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East Indies, especially in Malabar, &c. It is a lamentable truth that all these poisonous plants are in great use among some brewers, especially the Indian berries among the brewers of porter in England.

England, that in many other things is so much enlightened, as a kingdom, is, I believe, in regard to sanitary laws, excelled by several European nations; for if I am not mistaken, Morrice's Treatise on Brewing,—a book which has reached many editions in England, is allowed to circulate unchallenged as a hand-book on the art of brewing. From that work I quote the following :—"To 80 bushels of malt add 3 pounds of India berries. This addition," continues that scoundrel of an author in his Treatise, "will give the porter a more intoxicating quality, so that it appears stronger than it really is, and besides it prevents the second fermentation in the bottles, and their cracking too." Now, where a man is allowed to publish such a book, teaching men freely and openly how to cheat and poison their fellow-men, there cannot be that attention paid to sanitary regulations which there should be.

As in England the India berries, so in Bavaria the so-called Ignatius beans are in use among brewers. These beans were first discovered by the learned Jesuit Father Camelli, who found the plant on the Philippine Islands, and used the beans of it with some success in epilepsy. Highly pleased at this, he named them Ignatius beans in honor of Ignatius Logola, the founder of the order to which he belonged. Some scoundrels had scarcely found out the properties of these beans, when they commenced using them for

purposes quite contrary to that of the learned Father Camelli. But in Bavaria there are strict sanitary laws; bad brewers may try to escape them, but woe to them when their beer is found to be adulterated by any kind of poison; the government will punish them heavily, and also every man who would counsel the Bavarian brewers to use certain noxious substitutes for hops, or any other substance of which beer is composed, as Morrice has counselled the brewers of England. Hence it is easy to perceive that the health of a great many people in a city, or those of whole provinces, depends more or less on the uprightness of a few men who have chosen the profession of brewer. There is some good ale brewed in this city, but also some bad, against which the people ought to be warned. In the better ale brewed in this city, I have found water, spirit of wine in moderate quantity, carbonic acid, gluten and sugar, the aromatic and bitter elements of hops, and some salt. However, in some ale I have discovered some noxious elements, and if the manufacturers of that ale do not desist from the use of those ingredients in the articles they manufacture, I shall publish their names, that the public may be warned.

Now such a peculiar mixture of nourishing and slightly exciting substances in the better ales of our city, will do harm to no man. Its taste is agreeable, winey, and bitterish; it promotes the appetite, and even persons who are not at all used to it may drink a good deal before they feel any intoxicating effect. Of all spirituous drinks, it is the most advantageous to the healthy organization, and even to sick persons

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will sometimes prove to be of great value. For the rest, much the same might be said about ale as I have remarked about wine, in regard to persons who cannot control their desires. However, as this article has already been long enough, we will turn to other subjects.

## XVI.

## BRANDY AND VINEGAR.

By the distillation of strong fluids, containing alcohol, we get brandy, and all the so-called distilled waters. They consist, besides spirit of wine and water, of small quantities of transient and ethereal and oily elements. The term liquor, which is generally applied in the English language to all spirituous drinks, is taken from the French, and ought, therefore, to be applied as the French apply it, only to such brandies as are sweetened with sugar and aromatics. This kind of brandy (liqueur), provided that no noxious fluids are used in its preparation, has an exciting influence upon the nerves, like wine, promotes the appetite, the circulation of the blood, and the formation of fat in the human body; the latter especially, on account of its solid content of alcohol; for which reason it may be allowed to be taken in a small quantity before dinner. Several of this kind are used in the art of cooking, in the preparation of sauces for some kinds of food; for instance, puddings and other dishes. In combination with warm or hot water, these kinds of prepared brandies ought not to be taken too often, since they weaken the stomach; especially ought they not to be taken in the winter season, by men who

have to expose themselves in out-door business, since they promote the perspiration; and a person will easily catch cold, particularly when exposed to the cold air out of doors. Taken, however, as a medicine, whilst remaining in bed, they may prove somewhat beneficial in rheumatism, &c.

For the rest, a glass of brandy is better than a glass of bad wine, because brandy is more transient or volatile, and does not so easily cause acidity in the stomach. It does not, however, refresh the nerves so much as good wine, especially not so much as well-flavoured wine. And with all food with which wine will not agree, brandy certainly will agree much less; not even with a dish of meat, since it hardens every nourishing thing in the stomach. More particularly, brandy ought never to be taken either with, or shortly after a meal of eggs, lobsters, oysters, herrings, or other fish, nor with milk, cheese, or fat pork. But after a meal of legumes, or fruit in husks, if not too full of fat, a small glass of brandy will do no harm. It will agree the best with dishes prepared from the vegetable kingdom. Women, before they are fifty years of age, ought to take no brandy at all, except as a medicine, for several reasons.

All that I have said on wine if taken in excess, in regard to the health of man, may also be said concerning brandy; only that brandy weakens, or rather deadens the nerves much more than wine does, and also lessens the powers of the digestive organs. Brandy has always some tendency to harden the mesentery, and the stronger it is, the worse are its consequences.

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As already observed, I repeat, man ought to quench his thirst by water only, that valuable gift of nature, and to avoid all strong drinks as much as possible, using them only moderately, as spices are used in food; and thus keep his mind always sober, and his body in good health.

Vinegar (chemical properties,  $4\text{ C} \times 6\text{ H} \times 3\text{ O} \times \text{Aq.}$ ) is produced by the transmutation of alcohol and some vegetable substances, through the reception of oxygen under the presence of a ferment, similar to the production of acetic acid in yeast, &c. The vinegar commonly used is mostly made of alcohol, wine, beer, or cider; and vinegar obtained from wood is called acetum pyrolignosum, which, however, is very seldom used for the purpose of nourishment. But also all juices of sweet berries and fruits which contain sugar and fermenting substances, will, without much help of man, yield a good vinegar.

A good vinegar, that is, such as is obtained from spirits of wine, forms a perfectly clear fluid of a light yellow colour, has an agreeable spirituous sour smell, and a strong sour taste. Among those substances, concerning whose proper use and value most people do not know much, is vinegar. Although not in itself a nourishing thing, it is an excellent means for the preservation of health. A few table spoonfuls of vinegar put into a quart of water, gives the best cooling drink with which a person can quench his thirst, and refresh himself in hot days. For vinegar possesses a contracting power, and the result of contraction is always a cooling or quenching of heat, according to the law by which, through each contrac-

tion, an evaporation of warmth or heat is produced, which I have already pointed out in the article on the green leaf. Vinegar, therefore, is a good remedy in all sickness connected with increased heat of the human body, and, according to experience, the surest and quickest means of quenching all kinds of feverish thirst. A drink of good vinegar may also protect a man exposed to severe cold, so that he may not freeze to death. In dangerous diseases, where other sudorifics are forbidden, vinegar is a good means to start the perspiration and to protect against poisonous substances. In contagious diseases, vinegar may be sprinkled on glowing coals or hot iron, so that it may evaporate, and those who are around the diseased person may thus be protected from infection.

However, when vinegar is improperly used, and in great quantity, and for a long time, it will make a man quite meagre and pale-looking, will cause a gradually increasing inflammation of the mucous membrane of the intestines, and, according to the experience of some physicians, even real scirrhus ventriculi. All persons, whose digestive organs are weak, or who have a cough, or any real congestions, ought to avoid taking vinegar, either alone, or mixed with water, or with any other food. It should never be given to children whilst they are sick, even if they are very feverish, for in all sicknesses of children acids are forbidden.

The vessels in which vinegar is kept ought to be made either of glass, or of stone-earth, not of copper, tin, or lead, because vessels made of such metals contain poisonous elements, which easily become dis-

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solved or extracted by vinegar, and are injurious and dangerous to the health of man.

## XVII.

## COFFEE AND TEA.

The fruits of the Coffee tree (*Coffea Arabica*, Linn. Cl. v. R. 1 Rubiaceæ, Jussieu), are distributed through almost the whole world, and used by most people by the pouring of hot water upon the beans or seed of that plant, after they have been roasted and afterwards ground. There are three kinds in general use, viz.: 1st. The Arabic or Levantine Coffee, of which the Mocha is the finest sort, consisting of small dark coloured beans. 2d. The East India or Java Coffee, whose beans are larger, and of a lighter color. 3d. The West India Coffee, of which the best grows in Martinique, the beans of which are of a medium size, and of a greenish color. All these kinds of coffee contain oily fat, a peculiar kind of acid, legumine, sugar, salts, the coffein, an especially effective substance, and a bitter alcoholoid, which is easily soluble in water.

Coffee, especially when strong, has an influence upon man of an agreeably exciting, animating, refreshing, and sleep-banishing nature; and is far less transient and less overheating than wine, brandy, and tea. If it were not in such general use as an article of diet, it would be an eminent medicine, in certain cases, to all persons who are not accustomed to its daily use. However, coffee is just as little to be considered in itself as nourishing, or in general as a strengthening drink, as the above-mentioned drinks are. Persons

of a plethoric habit ought to drink no strong coffee at all.

The beans which should be used for the preparation of coffee, ought not to be too old; the best are those over one year old, but not over two years old. In order to prepare good coffee, a quantity of either Mocha, Java, or Martinique beans ought to be washed, then dried between some cloth, and roasted in a covered vessel over a slow, gradually increased fire, until the beans have assumed a light brown, not dark brown, color. If the vessel in which coffee beans are roasted, is not covered, they will lose their aroma, for which reason great attention should be paid to this. When this has been done, they should be ground as fine as possible, boiling water poured over, allowed to stand for a little while, and then filtered. The strength of the coffee may be regulated by the smaller or larger quantity of boiling water, which ought always to be in a state of ebullition when poured over.

For the beans of coffee are frequently supplied, wholly or partially, with certain substitutes, of which burnt chicory root is the commonest; carrots, grains of rye and barley, acorns, chestnuts, &c., are also used. All these substances are, through the avarice of man, subjected to various adulterations, and are thus more or less dangerous to health. Especially is the ground substance called domestic Coffee, imported from the United States, full of adulteration, and on account of its cheapness, is bought and used by many poor people, who, however, pay a doubly high price for it—their health.

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in some so-called domestic Coffee, are ground bricks, several earths, burnt roots of all kinds, roasted potatoes, stale bread, and the grounds of coffee already used,—which latter are the least injurious addition,—roasted acorns, grass-seed, peas, beans, cocoa-shells, &c. Every good housewife should not, therefore, trust in such coffees, but buy, roast, and grind the natural beans herself.

Tea (*tea verides et Bohea* Linné), is an infusion of the dried leaves of a bush which grows in China, Japan, and the north-east of Asia. The leaves of this tree are annually harvested two or three times, either by roasting over an open fire, or after their fading, by steam, dried in the air. The leaves prepared in the first manner, give the black; those dried in the air and rolled together with the hands, the green tea. To the last kind belongs the Emperor Tea, which comes from the young leaves of the first harvest. This kind seldom comes either to Europe or to this Continent, being intended only for the Emperor of China and the people of his court. It has a lively green color, and an agreeable balsamic smell. Another good kind is the Soulong or Tshulong tea, consisting of small, bluish-green, tightly-rolled leaves, which have become aromatized with the blossoms and flowers of the plant *lan-hoa*; it is called also caravan tea; then the pearl tea, forming little roundish-rolled lumps of leaves, as large as a pea; and is often imported by other nations under the name of Imperial or Emperor tea. Next comes the gunpowder tea, in form of little balls, and of a dark color; the Hyson or Haysan tea, in longish, tightly-bound little leaves of a bluish color, aromatic smell and

agreeable taste ; Haysan Goilbee, of less solid content, with long, small leaves ; Songlo, or Singlo, with yellowish green, great, badly rolled leaves, and much dust, and a great many other kinds besides, of different names, and more or less value.

Of the black or brown tea are in use the Pekoe tea, which has little brown leaves, covered here and there with small white spots, with a strong flavour. This kind softens and draws slowly, for which reason it can be used twice for infusion. The Souchong or Soutshong, one of the best kinds of tea, consists of perfectly juicy, young, and well-rolled leaves, of which one kind, under the name of Padri-Souchong, with small, selected, rolled leaves, of a light brown, which smell agreeably, yet not strong,—is sometimes sold as Caravan tea. Finally there are to be mentioned the poorer kinds, as Linkisam, with small and rough leaves ; Kamponi, with medium-sized, dark brown or black shining leaves ; Congou, Bohea, and some other sorts. The brickstone tea is the poorest of all of them ; the leaves are pressed together in China into the form of a brick, from which it derives its name.

The adulterations of, and additions to tea, are manifold, and often hard to detect. The most injurious adulteration is the colouring of tea, with Berlin blue, and mixing it with plaster of Paris. Therefore tea, especially green tea, ought always, before it is used, to be shaken about in cold water, by means of which part of the coloring matter is absolved ; or the microscope should be used, which, however, is not in the possession of many families.

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mixed with tea, which, however, can only be discovered by a botanist, or sometimes by the taste. Tea contains, among its elements, a weak, bitter substance called Tein, about 6 per cent., which is similar to, coffein, and which is combined with tanninum purum; about  $\frac{1}{2}$  to 1 per cent. of transient etherial oil, which substance gives to the tea its aroma and its taste; and besides these, about 15 to 20 per cent. of glaire or casein; also gums and salts. Green tea contains more etherial oil than black tea. Each infusion of tea ought to be prepared with boiling water, and in perfectly closed vessels, whereby, however, the casein of the leaves becomes retained by the tanninum, and not fully dissolved. But this is of no great consequence; tea is in any way neither nourishing nor wholesome, and has done more harm, especially among women, than any other drink, and ought not to be recommended at all. If a person cannot help overloading her stomach daily with several large cups of tea, let her at least sweeten it well, and put milk to it to the extent of one-half, in order to make the effects less injurious.

## XVIII.

## CHOCOLATE AND ACORN COFFEE.

Chocolate is a mass prepared from roasted and finely-ground cacao beans, sugar and spices, especially vanilla. These beans are the seed kernels of the fruit of the cacao tree, called *Theobroma cacao*, or *Theobroma bicolor*, which grows in South America, and in the West Indies. The fruit of this tree is melon-like,

containing five ranks of from five to six beans each, of the size of an almond. Each of these beans has a hard, brown, shining, rough shell, of which the kernel must be stripped before its preparation. These beans so prepared become like roasted coffee-beans, and are then finally ground, with the application of heat, in an apparatus expressly made for that purpose, by which means a pulp is formed, that is afterwards mixed with sugar, and spices, made into certain forms whilst still hot, and then left to become cold. The beans must not be too much roasted, otherwise the fat which they contain will be changed into fat acid, and their starch into dextrin, and thus a somewhat strong, bitter, aromatic substance will be formed. Some manufacturers of chocolate, less honest than they should be, add flour to the pulp, and thus cheat ignorant people. The cacao beans consist of a peculiar mild-tasting fat, called cacao-butter, about 40 to 50 per cent., much glaire, starch, gum, cellusa, tanninum, purum, and of a weak, bitterish substance, called theobrominum, which is similar to tein and coffein, and which also has an exciting influence upon the nervous system. Because of their fat and their solid contents of glaire substance, the cacao beans, or the chocolate prepared from them, is a valuable, nourishing drink for man. It is prepared by the addition of either water, wine, or milk, sometimes eggs are added to it; and thus make the drink the richer. However it is well to be observed, that it gives only a raw nourishing juice, as all fluid victuals do; it makes men lazy and voluptuous, and therefore ought not to be taken in large quantities by certain persons.

Much rather might acorns (*glandes quercus*), which are scarcely appreciated in their solid contents of nourishment, in this Province, be recommended to be used. The acorn is the fruit of the oak tree, belonging to the natural family of the Amentaceen, and in the system of Linnæus to *Monocea Polyandria*. The kernel of this fruit has a bitterish, keen, and contracting taste. It contains, besides 32 per cent. of cellusa, many nourishing substances, viz., 38 per cent. starch meal, 11 per cent. gum and fat oil, 9 per cent. tanninum, 5 per cent. of bitter extractive substance and resin, and a small quantity of different salts. Hence acorns appear at once both as an astringent tonic and a means of nourishment. In order to preserve them well, the kernels ought to be stripped of their leather-like, bright yellowish-brown shell, cut, and strongly dried. In this form they may be used either as a powder, or in a decoction for both medicinal and nourishing use. Scrofulous people especially, will derive great benefit from a decoction of acorns or acorn coffee. In Germany, such acorn coffee is prepared exactly as other coffee, viz., by roasting the peeled kernels before grinding, in the same way as the coffee beans are roasted, hence the name, acorn coffee. The celebrated physician Hufeland, especially recommends highly a coffee thus prepared. When the kernels of the acorns become roasted, their starch meal is changed into gum, and the tanninum suffers a change; and besides this, during the process of roasting there is formed in the acorn some empyreumatic oil. The nutritive value of the acorn shows itself in its frequent use in fattening pigs. The Jews

long since knew it, for the lost son in the parable of our Lord, was glad to satisfy his hunger with the acorns on which the swine were fed. However, acorn coffee must be prepared very carefully, just as coffee from coffee beans; it must not be scorched too strongly, and must have a brown color, and an agreeable, refreshing smell. Its preparation in general is just the same as other common coffee. It must be scalded with boiling water, allowed to draw, and afterwards filtered, and then milk and sugar must be added. Half an ounce of roasted and ground acorns to about twelve ounces or not quite a pint of water, is sufficient, and certainly would be cheaper than coffee and chocolate. Persons who might, perhaps, not like the taste of acorn coffee alone, might add some coffee beans to the acorns, and thus alter their taste.

## XIX.

**GENERAL RULES IN REGARD TO THE NOURISHMENT OF MAN.**

Eating and drinking, as I have already once before observed, means only to introduce substances from the outer world into the body, in order to sustain it. Men ought, therefore, neither to eat nor to drink before hunger and thirst make it necessary. The absence of hunger is always a sign that the stomach needs no food, although in other ways the body may be in want of nourishment. If under such circumstances, food is given to the stomach, it is unnatural, and consequently injurious. Absence of thirst is, in a natural state, usually a proof that sufficient fluids for the maintenance of life are distributed through the body.



A person, therefore, who drinks without being thirsty, commits a foolish action in filling or overloading the stomach with something superabundant.

There is a true and a false hunger and thirst: it is only the first that must urge men to eat and to drink. False hunger always indicates that the condition of the body is faulty, and especially that of the stomach. There are, at such a time, either such sharp, irritating or tickling substances, or uncleannesses in the stomach, as cause a stronger motion of the same than is necessary, and thus produce a kind of craving, or hunger, or the organs of sensation of the stomach have already, by various causes, become so extremely irritable, that without the least proper outward irritation, even if a quantity of mucus lodges in the stomach, which otherwise lessens the appetite, yet the sensation referred to arises. The longing for drink—the natural thirst—must, if it is really a true thirst, be easily quenched and satisfied with the simplest fluids. The false—sickly or artificial thirst—is hard to satisfy; and is always founded upon a faulty condition of the body.

The bad consequences of unseasonable eating and drinking, are innumerable. It not only creates some peculiar sicknesses and diseases, but also causes such inward or outward sicknesses or diseases, as have not absolutely originated from taking too much food, to be more dangerous, as for instance, small pox, measles, typhus fever, *syphilis*, wounds, &c. The next consequence of unseasonable eating and drinking is an overloading of the stomach. The ideas which we combine in the words overloading of the stomach, are absolutely relative, according to the bodily form of

different men ; and whether each of them can bear a greater or less quantity of food. Unseasonable and intemperate eating and drinking are very highly injurious indeed to the stomach and intestines. They cause oppression of the stomach, cramps, flatulence, dizziness, apoplexy, ulcers in the mouth and throat, slimy or expectorative consumption, liver complaint, costiveness, &c. All burning fevers generally result fatally to such men, as by intemperate eating and drinking have spoiled the juices of their bodies ; and but seldom is a physician able to render any assistance, especially in small pox, measles, dysentery, &c., where evidently the danger of the sickness or disease is to be ascribed far less to its peculiar virulence, than to the bad condition of the juices of the body, which have been corrupted by intemperance in eating and drinking, before the disease made its appearance. A man ought never to confine himself too much to a certain time of eating and drinking, but eat and drink only when he is hungry or thirsty. In general, the hour of noon is the principal hour to take food, partly on account of the general rules of most houses, or because there has been the time necessary for preparing good food, and partly because the body has not become nourished during the night, and since morning the labor of man has been arduous, so that all the powers are exhausted, and partly because at that time the hunger of man is the most natural. But most men who work with much bodily motion, ought to eat something in the evening before they go to sleep, but much less food, and of a lighter kind than at noon time, and especially no meat. However, persons

who are in circumstances, or are obliged to pursue a quiet mode of living, combined with much sitting, do well to take food but once a day, either at noon, or in order to do better without a meal at night, about three o'clock in the afternoon. Healthy and hard working men do better to eat seldom and a good deal at once, whilst for children, sickly and weak people, it is better to eat oftener, and but little at each time.

Drinking is confined to no time: a man may drink as often as he is thirsty, that is, naturally thirsty, not otherwise. All victuals used either as drink or as food, ought to have a mild, sweetish taste and smell. They ought, in the first place, to cause but little labor to the teeth; secondly, have nothing striking either in taste or smell; and thirdly, be neither bitter nor tough, nor contracting, nor peculiarly salt, nor extremely acid, neither stupefying nor purely oily, nor sweet alone; in one word, they ought to be entirely palatable to the individual who is going to partake of them.

## XX.

**CONSEQUENCES OF INTEMPERANCE IN EATING AND DRINKING UPON THE MORAL LIFE OF MAN.**

In consequence of the close relation between the bodily and spiritual condition of man, intemperance in eating and drinking must have a most disadvantageous influence upon the condition of our spiritual or moral life; since a man, who does not feel in bodily health, cannot possibly have a clear, exact intellect, and an undisturbed control over his thoughts and desires. Such a man, as experience teaches, will be

always overcome much more easily by anger than he would if his body were in the proper condition of health, and therefore will more easily commit injustice and vice, and will complain about things hardly worth mentioning, as if they were crimes of the worst kind. Since, therefore, most men have accustomed themselves to eat and to drink more and oftener than is necessary for the sustenance of the body, we need not wonder there are so many bodily and spiritual wants among us, that physicians and lawyers are never out of employment, and that the progress of all that is really true and good, and beneficial to man, advances so slowly.

Too much food makes a man lazy for all good work ; and business and labor is healthy, but idleness is unhealthy. All men who have reached an advanced age, have mostly been such persons as had to labor hard during their life time. A busy and laborious life in youth is the foundation of a long and healthy life in a double way ; partly because it gives to the body that degree of firmness, strength and hardness, which are necessary to carry us on to old age, and because it makes all that mainly leads to fortune and happiness attainable by man—I mean the progress in all that is good and agreeable to man. Most of the great men of different nations had to endure hardships of all kinds in their youth. They were mostly deprived of those opportunities which may lead men to intemperance in eating and drinking. Thus they kept their stomachs in good order, and by this means their brains sober, and they became famous among their fellow-men during the time in which

they lived, and were not forgotten in history by those who lived after them.

The taking of too much food makes a man lustful. Voluptuousness, however, must always be considered as a vice, and every single vice is a means of shortening life. A lustful man will always seek the enjoyment of physical love when he ought not to seek it, even in youth, when his body is not yet fully developed. And when his body is fully developed, lustfulness will make him forget his duties towards his future wife; or if he is married he will become unfaithful to his wife, and vice versa; for if a man is unfaithful, how may he require or expect his wife to be true to him. Voluptuousness will occasion a man not to enter into matrimonial life, because all irregular enjoyments have this peculiarity,—to deter man from simplicity, and from the repetition of enjoyment with one and the same object. However, as it is in most things, so it is in this, simplicity is necessary for many reasons. Pure matrimonial life prevents the desire of changes in enjoyment, and consequently all weakening, unnatural impulses or irritations. It will temper the eccentric, fanciful hopes, and plans or projects, as well the just as excessive anxiousness: in short, matrimonial life is, and will always be, the only one which leads men to happiness and long life.

Intemperance in eating and drinking causes people to be neglectful. The husband will forget to look after the serving man, and his wife to watch the serving girl. The servants will neglect their duties of looking after the children, and whatever they may have to take care of. The serving man will forget

that his pipe is burning and uncovered, when he is going into the barn to feed the cattle; and how often are fires occasioned by such neglect and forgetfulness! Perhaps at the same time, in another house, the serving girl forgets to put out of the way of the children the matches with which she has just kindled a fire; the little children around her get hold of them, and sooner or later the house is on fire, or perhaps one of the little ones is poisoned from sucking the phosphorus that is on the matches, &c.

Intemperance in eating and drinking will cause a man to be selfish and stingy. Selfishness and stinginess lead to all kinds of crimes. A selfish man makes his stomach his god, and cares little or nothing for others. He cares not whether his neighbour's house is on fire, if only the fire does not reach him. He will willingly cheat any person, if that person cannot find it out and expose him. He will not care if his neighbour is sick or poor, so that he himself feels well, and has plenty; but he will care very much, and be full of envy and jealousy, if his neighbour has something more than he has himself. He will never feel well, never be satisfied; will always imagine he is sick, and will really be always sickly, but he will never believe that his eating and drinking too much is the cause of all this. If finally, he cannot help believing it, that is, when he is thrown upon a bed of sickness, his physician will have great trouble to induce him to abstain from eating and drinking too much, in order to have him restored to health again, and make him a better man too.

Persons of intemperate habits are always in a cer-

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tain kind of artificial fever, and it may be truly said of them, *consumendo consumimur*. Nothing has a more prejudicial influence upon the health and moral conduct of man, than intemperance, and the jealousy and envy proceeding from it. These vices exercise a powerful influence on the whole organism of man, and positively cause shortness of life, since these vices, as well as others, sharpen the gall, and thus incite to self-destruction, or in some cases, even actual self-murder. Since now the greater part of men have thrown themselves out of a natural manner of living, it is no wonder there are so many hypochondriacs among us. If a physician tells such a man the real plain truth, he will not believe him, but goes to another one, until he has consulted all the physicians in town. Finally, he will take up some so called medical books or advisers, as for instance, Warren's Household Physician, &c. He will read all that is written in these books with more attention than he is generally accustomed to pay to any other thing except the stomach, and thus imagine he perceives his own trouble in every shape of disease explained in such books. Because he did not believe what his physician told him, and imagines that he finds his troubles plainly described in the book before him, and the remedies for them prescribed too, he thinks all the physicians he has consulted, were fools, and only himself and the writer of the book not so; and now he commences to prepare for himself his own medicine according to the ideas of Ira Warren, &c., until his health sinks more and more, and he is upon a bed of sickness. If he is not married, he has been a continual source of grief to his

parents, and if he is a married man, he has during all this time neglected the main duties towards his wife and children. He was always sick and unable to work,—however he could eat and drink all the time, his appetite for this or that food was always good,—it was the only thing that helped him along,—it could not, he imagines, be hurtful to him at all. Meanwhile, however, his stomach becomes weakened more and more; and entirely broken down in body and soul, he calls in his physician again; and he tells him, “Do you now believe me—did I not always tell you? but now it is too late”—and really in some cases it is too late—the intemperate man must die sooner than a man who lives temperately; and mostly leaves his poor family—the wife of his youth and his own children—in deep distress, and very limited circumstances. God has offered us in nature a great many enjoyments, and all of them will prove beneficial to man if used moderately; but woe to him who uses them to excess—he will surely be punished for it. I could give a good many illustrations from real life, how men of intemperate habits have become gamblers, thieves, and even murderers, if I had not already directed the attention of my readers sufficiently to the high importance of the nourishment of man, and of temperance and moderation in all enjoyments, in regard to health. Since, as I believe, I have already done this, I once more part from the reader, leaving the explanation of the evil consequences of intemperance, in relation to the future happiness of man, after this, his life’s morning has passed away, to the different members of the theological profession.

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